

WHAT IS CLAIMED IS:

- 1 1. A circuit, comprising:
2 a processor voltage input line to receive a processor voltage signal;
3 a reference voltage output line to provide a reference voltage signal associated
4 with a determination of when the processor voltage signal exceeds a threshold value; and
5 a curve shaping circuit to generate the reference voltage signal such that the
6 reference voltage signal initially increases with increases in the processor voltage signal
7 and then decreases with a further increase in the processor voltage signal.
- 1 2. The circuit of claim 1, wherein the threshold value is associated with an
2 acceptable voltage level for a processor.
- 1 3. The circuit of claim 1, wherein the reference voltage signal decreases
2 substantially with a further increase in the processor voltage signal.
- 1 4. The circuit of claim 1, wherein the reference voltage signal follows the
2 processor voltage signal up to a level associated with a transistor voltage threshold.
- 1 5. The circuit of claim 1, wherein the reference voltage is clamped to a diode
2 voltage threshold.
- 1 6. The circuit of claim 1, further comprising:
2 a reference voltage output line to provide the reference voltage signal.

1 7. The circuit of claim 1, further comprising:

2 a power indication circuit, comprising:

3 a processor voltage input line to receive the processor voltage signal,

4 a reference voltage input line to receive the reference voltage signal, and

5 a comparator circuit to generate a power indication signal based on the
6 processor voltage signal and the reference voltage signal.

1 8. The circuit of claim 7, further comprising:

2 a scaling circuit to generate a scaled processor voltage signal, wherein the
3 comparator circuit is to generate the power indication when the scaled processor voltage
4 signal exceeds the reference voltage signal.

1 9. The circuit of claim 8, wherein the scaling circuit comprises a variable
2 resistance divider to substantially scale down the processor voltage signal.

1 10. The circuit of claim 9, wherein the reference voltage signal and the scaled
2 processor voltage signal substantially reduces a temperature sensitivity of the power
3 indication signal.

1 11. The circuit of claim 9, wherein the reference voltage signal and the scaled
2 processor voltage signal substantially reduces a noise sensitivity of the power indication
3 signal.

1 12. The circuit of claim 7, wherein the power indication circuit further comprises:
2 a power indication output line to provide the power indication signal.

1 13. A circuit, comprising:
2 a processor voltage input line to receive a processor voltage signal;
3 a reference voltage output line to provide a reference voltage signal associated
4 with a determination of when the processor voltage signal exceeds a threshold value; and
5 a curve shaping circuit to generate the reference voltage signal such that the
6 reference voltage signal will exceed a scaled threshold value before stabilizing at the
7 scaled threshold value.

1 14. The circuit of claim 13, wherein the threshold value is associated with an
2 acceptable voltage level for a processor.

1 15. A circuit, comprising:
2 a processor voltage input line to receive a processor voltage signal;
3 a variable resistance divider to substantially scale down the processor voltage
4 signal to generate a scaled processor voltage signal;
5 a reference voltage input line to receive a reference voltage signal;
6 a comparator circuit to generate a power indication signal when the scaled
7 processor voltage signal exceeds the reference voltage signal.

1 16. The circuit of claim 15, wherein the reference voltage signal initially
2 increases with increases in the processor voltage signal and then decreases with a further
3 increase in the processor voltage signal

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1 17. A processor, comprising:
2 a reference voltage circuit, comprising:
3 a processor voltage input line to receive a processor voltage signal,
4 a reference voltage output line to provide a reference voltage signal, and
5 a curve shaping circuit to generate the reference voltage signal such that
6 the reference voltage signal initially increases with increases in the processor
7 voltage signal and then decreases with a further increase in the processor voltage
8 signal; and
9 a power indication circuit, comprising:
10 a processor voltage input line to receive the processor voltage signal,
11 a scaling circuit to generate a scaled processor voltage signal,
12 a reference voltage input line coupled to reference voltage output line of
13 the reference voltage circuit, and
14 a comparator circuit to generate a power indication signal when the scaled
15 processor voltage signal exceeds the reference voltage signal.

1 18. The processor of claim 17, wherein the power indication signal is associated
2 with an acceptable voltage level for the processor.

1 19. A method, comprising:
2 generating a reference voltage signal such that the reference voltage signal
3 initially increases with increases in a processor voltage signal and then decreases with a
4 further increase in the processor voltage signal;
5 generating a scaled processor voltage signal based on the processor voltage
6 signal; and

7 generating a power indication signal when the scaled processor voltage signal
8 exceeds the reference voltage signal.

1 20. The method of claim 19, wherein the power indication signal is associated
2 with an acceptable voltage level for a processor.